

### SYSTEM BENEFITS:

MAS HE-POXY is a toughened, high elongation, two-part epoxy adhesive engineered for a superior grip to metals, plastics, glass, masonry, fiberglass and wet and difficult-to-bond hardwoods. It is a thixotropic paste adhesive that has an easy to use 1:1 mix ratio by volume and provides a relatively long open working time. Structural bonds made with HE-POXY are resilient and can withstand the stresses of expansion, contraction, shock and vibration.

- High elongation
- Toughened
- Improved adhesion

### HANDLING PROPERTIES

	HE-POXY	Test Method
Resin Density at 25°C, lbs/gal	10.0	ASTM D1475
Hardener Density at 25°C, lbs/gal	8.3	ASTM D1475
Mix Ratio by Weight	1.2A : 1B	Calculated
Mix Ratio by Volume	1A : 1B	Calculated
Initial Mixed Viscosity 25°C, cP	Thixotropic	ASTM D2196
Gel Time at 72°F, 100g mass, min.	40	ASTM D2471
Working Time, thin film, minutes	75	
Initial Cure Time, hours	3-4	
Workable Cure Time, hours	7-10	24 Hours for High Loads
Minimum Recommended Temp, °F	40	

### PHYSICAL PROPERTIES

	HE-POXY	Test Method
Color	Buff	Visual
Tensile Strength, psi	5,330	ASTM D638
Tensile Modulus, psi	187,000	ASTM D638
Tensile Elongation, %	23.8	ASTM D638
HDT, Room Temp Cure, °F	134	ASTM D648
HDT, Post Cure, °F	189	ASTM D648
Compressive Strength, psi	7,200	ASTM D695
Flexural Strength, psi	8,800	ASTM D790
Flexural Modulus, psi	203,000	ASTM D790
Cured Density, g/cm <sup>3</sup> (lbs/in <sup>3</sup> )	1.14 (0.041)	ASTM D792
Volumetric Yield, in <sup>3</sup> /lb	24.3	ASTM D792
Volumetric Shrinkage, %	23.5	ASTM D792/2196
Hardness, Shore D	77	ASTM D2240
Tg (Onset), DSC, °F	195	ASTM D4065
Tg (Ultimate), DSC, °F	213	ASTM D4065

## **INSTRUCTIONS FOR USE:**

For best results use this product at or above 40°F. Surfaces should be clean, dry and sanded before application to remove dirt, dust, grease, loose paint, oils or other contaminants. The adhesive will gel in about 40 minutes at 72°F. Assemble and clamp parts in position before the adhesive begins to gel. Keep parts clamped until the adhesive is cured, about 3-4 hours at 72°F. Cure time is faster at warmer temperatures and slower at cooler temperatures.

## **STORAGE AND CRYSTALLIZATION:**

Store between 60-90°F in a dry place. After use, tightly reseal all containers and store products on a raised surface during cold weather and avoid storing near outside walls or doors. If available, purge with dry nitrogen to preserve color and minimize moisture contamination. Do not allow to freeze during winter storage. Do not use material with any signs of crystallization such as solid chunks, grainy texture or white color. Crystallization can be reversed by heating the material to 125-140°F, and stirring occasionally, until all crystals dissolve.

## **SAFETY HANDLING:**

Wear protective gloves, clothing, and eye/face protection. Use only outdoors or in a well-ventilated area. Avoid contact to the skin and eyes. Avoid breathing dust, fumes, gas mist, vapors and spray. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse. These products may cause skin and respiratory allergic reactions. Consult product Safety Data Sheets for complete precautions for use of this product.

Endurance Technologies, Inc. has experience only in the compounding of resins and hardeners and not in the actual manufacture of tools or parts. Each piece is different. The user should run tests to assure the suitability of the system for use in a particular application. The test data and results set forth herein are based on laboratory work and do not necessarily indicate the results that the buyer or user will attain.

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